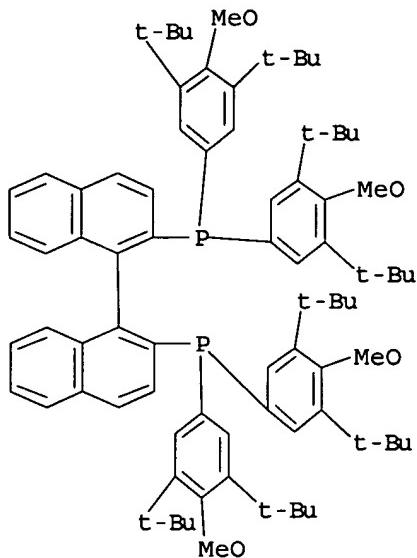


10/536,731

(FILE 'HOME' ENTERED AT 17:23:43 ON 31 AUG 2006)

FILE 'REGISTRY' ENTERED AT 17:24:02 ON 31 AUG 2006  
L1 STRUCTURE uploaded

=> d 11  
L1 HAS NO ANSWERS  
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11  
SAMPLE SEARCH INITIATED 17:24:37 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 2 TO ITERATE  
  
100.0% PROCESSED 2 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01  
  
FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 2 TO 124  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s 11 full  
FULL SEARCH INITIATED 17:24:45 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 50 TO ITERATE

100.0% PROCESSED 50 ITERATIONS 2 ANSWERS  
SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> fil caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
FULL ESTIMATED COST ENTRY SESSION  
166.94 167.15

FILE 'CAPLUS' ENTERED AT 17:24:53 ON 31 AUG 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 31 Aug 2006 VOL 145 ISS 10  
FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

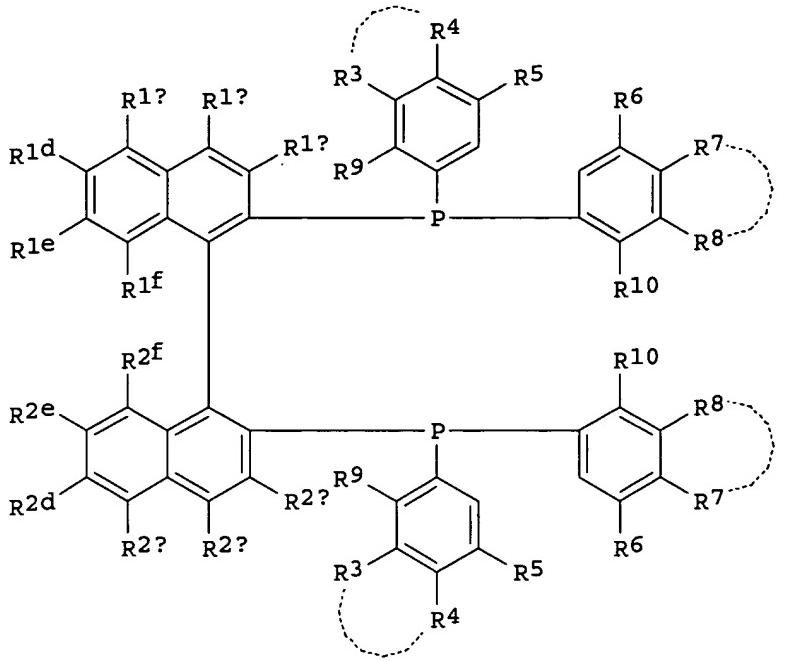
<http://www.cas.org/infopolicy.html>

=> s 13  
L4 2 L3

=> d 1-2 bib abs

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2004:493713 CAPLUS  
DN 141:63880  
TI Asymmetric synthesis using transition metal complex having diphosphine complex as ligand  
IN Goto, Mitsutaka; Yamano, Mitsuhsisa; Kawaguchi, Shinji  
PA Takeda Chemical Industries, Ltd., Japan  
SO PCT Int. Appl., 41 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004050667	A1	20040617	WO 2003-JP15536	20031204
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2003289177	A1	20040623	AU 2003-289177	20031204
JP 2004196793	A2	20040715	JP 2003-406173	20031204
EP 1568701	A1	20050831	EP 2003-777248	20031204
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1720252	A	20060111	CN 2003-80105194	20031204
US 2006094887	A1	20060504	US 2005-536731	20050527
PRAI JP 2002-354341	A	20021205		
WO 2003-JP15536	W	20031204		
OS MARPAT 141:63880				
AB A transition metal complex having 2,2'-bis[bis(3,5-di-tert-butyl-4-				



AB This document discloses a process for preparation of compds. represented by the general formula I [wherein R1a, R1b, R1c, R1d, R1e, R1f, R2a, R2b, R2c, R2d, R2e, and R2f are each independently hydrogen or the like; and R3, R4, R5, R6, R7, R8, R9, and R10 are each independently hydrogen or the like], characterized by reacting a binaphthyl compound having 2 leaving groups with a phosphine-borane complex in the presence of an amine and a nickel catalyst in a solvent. The diphosphine compds. of this invention are used as ligands of metal catalysts in asym. hydrogenation, etc.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

methoxyphenyl)phosphino]-1,1'-binaphthyl as a ligand is used for asym. synthesis, in particular asym. hydrogenation of  $\beta$ -oxoalkanoic acid esters of formula R<sub>1</sub>COCH(R)CO<sub>2</sub>R<sub>2</sub> [R = halo, each (un)substituted alkylsulfonyl or arylsulfonyl; R<sub>1</sub> = each (un)substituted hydrocarbyl or heterocyclyl; R<sub>2</sub> = (un)substituted hydrocarbyl] to chiral  $\beta$ -hydroxy alkanoic acid esters of formula R<sub>1</sub>C\*H(OH)CH(R)CO<sub>2</sub>R<sub>2</sub> (R-R<sub>2</sub> = same as above; \* denotes an asym. carbon atom). The presence of the transition metal complex in the reaction system of an asym. reaction system allows the preparation of an objective compound having an objective absolute configuration with improved efficiency. Thus, 12.66 mg (S)-2,2'-bis[bis(3,5-di-tert-butyl-4-methoxyphenyl)phosphino]-1,1'-biphenyl was added to a solution of 4.27 mg Rh(cod)2OTf in 1 mL MeOH and stirred at room temperature for 30 min to give a solution of ruthenium complex which was added to a solution of 0.10 g Me (Z)- $\alpha$ -acetamidocinnamate in 4 mL MeOH and hydrogenated under 1.0 MPa H pressure at 25° for 24 h to give Me (R)-3-phenyl-2-acetamidopropanoate with >99.9% conversion and 91.4% ee.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2003:454337 CAPLUS  
 DN 139:36636  
 TI Process for preparation of diphosphine compounds and intermediates therefor  
 IN Goto, Mitsutaka; Yamano, Mitsuhsisa  
 PA Takeda Chemical Industries, Ltd., Japan  
 SO PCT Int. Appl., 95 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003048174	A1	20030612	WO 2002-JP12758	20021205
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002354100	A1	20030617	AU 2002-354100	20021205
	JP 2003231691	A2	20030819	JP 2002-354338	20021205
	EP 1452537	A1	20040901	EP 2002-786039	20021205
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	CN 1617876	A	20050518	CN 2002-827906	20021205
	US 2005027124	A1	20050203	US 2004-497808	20040604
PRAI	JP 2001-374909	A	20011207		
	WO 2002-JP12758	W	20021205		
OS	MARPAT	139:36636			
GI					

10/536,731

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	458	(556/21).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/08/31 18:31
L2	419	(568/881).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/08/31 18:42
L3	87	(549/507).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/08/31 18:46
L4	193	(549/513).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/08/31 18:46

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	552	(560/179).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2006/08/31 18:54